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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,722	01/30/2006	Hitoshi Nakajima	040894-7232	5604

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MORGAN LEWIS & BOCKIUS LLP  
1111 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20004

EXAMINER
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HAN, KWANG S

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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09/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/534,722	<b>Applicant(s)</b> NAKAJIMA ET AL.	
	<b>Examiner</b> Kwang Han	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/30/06, 5/22/08</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

2. Claim 3 objected to because of the following informalities: It fails to list the independent claim number to which the claim is dependant on. Appropriate correction is required.

For purposes of claims analysis it will be assumed that claim 3 depends from claim 1.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-10, it is unclear as to meaning of the limitation of a "partial salt".

Regarding claim 3, it is unclear as to whether the phrase in the parentheses is positively recited.

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Regarding claims 7 and 8, Claim 1 is drawn to a "solid heteropolyacid catalyst for a fuel cell" but claims 7 and 8 recite "a solid heteropolyacid for a fuel cell". It is unclear if these two phrases are meant to be the same.

Claims depending from claims rejected under 35 USC 112, second paragraph are also rejected for the same

For the purposes of examination, the phrase "a solid heteropolyacid for a fuel cell" will be interpreted to mean "solid heteropolyacid catalyst for a fuel cell."

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Otomo et al. (JP 2002-134122, as cited in IDS, online translation).

Regarding claim 1, Otomo et al. is directed towards a fuel cell material comprised of the following:

- a solid [0025] heteropolyacid catalyst [Abstract],
- including a noble metal [0011],
- a transition metal [0012], and
- a molecular weight between 800 to 10000 (molecular weight of working example [0045]  $\text{H}_3\text{PW}_{12}\text{O}_{40}\text{-Pt-C}$ , MW = 3093).

Regarding claim 2, Otomo et al. discloses a fuel cell heteropolyacid catalyst which includes a noble metal including Ru, Pt [0011] and a transition metal including Mo, W, Nb, and Ta [0012].

Regarding claim 3, Otomo et al. discloses a heteropolyacid catalyst with an alkali metal [0010-0011] (Caesium as first metal).

Regarding claim 4, Otomo et al. discloses a polyacid having a Keggin structure [0014].

Regarding claim 5, Otomo et al. discloses a heteropolyacid [Abstract] where one of the noble metal [0012] (platinum or palladium substituted for hydrogen) is substituted in a skeleton of the heteropolyacid.

Regarding claim 6, the applicant is directed towards the discussion concerning claim 2.

Regarding claim 7, Otomo et al. discloses an electrode with the heteropolyacid being held on the surface of a carbon electrode [0041, 0046] (base material, carbon paper).

Regarding claim 8, Otomo et al. discloses a mixture of the solid heteropolyacid for a fuel cell with a conductive powder (carbon) and a binder (Nafion) [0045-0047].

Regarding claim 9, Otomo et al. discloses a conductive powder which is carbon [0045].

Regarding claim 10, Otomo et al. discloses a binder that is an organic polymer [0046] (Nafion).

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***Contact/Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang Han whose telephone number is (571) 270-5264. The examiner can normally be reached on Monday through Friday 8:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy Tsang-Foster can be reached on (571) 272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. H./

Examiner, Art Unit 1795

/Susy Tsang-Foster/

Supervisory Patent Examiner, Art Unit 1795